

WHAT WE CLAIM IS:

1. A separator for a valve regulated lead acid battery, which is composed mainly of fine glass fibers and also contains inorganic powder, beaten natural pulp, and  
5 heat-weldable organic fibers, wherein

the heat-weldable organic fibers have a fineness of 1.5d (deniers) or less and a fiber length of 1 mm or more, and the amount of the heat-weldable organic fibers is from 3% to 15% by weight.

10 2. A separator for a valve regulated lead acid battery as claimed in claim 1, wherein the amount of the inorganic powder is from 5% to 30% by weight and the amount of the natural pulp is from 2% to 15% by weight.

15 3. A separator for a valve regulated lead acid battery as claimed in claim 1 or 2, wherein the fine glass fiber is acid resistant glass fiber having a mean fiber diameter of 2.0  $\mu\text{m}$  or less.

20 4. A separator for a valve regulated lead acid battery as claimed in any one of claims 1 through 3, wherein the inorganic powder is a silica powder having a specific surface area of 100  $\text{m}^2/\text{g}$  or more.

25 5. A separator for a valve regulated lead acid battery as claimed in any one of claims 1 through 4, wherein the natural pulp is beaten to the extent of 250 mL or less in the Canadian freeness.

6. A separator for a valve regulated lead acid battery as claimed in any one of claims 1 through 5, wherein the fineness of the heat-weldable organic fibers is from 0.5d to

1.5d and the fiber length of the heat-weldable organic fibers is from 1 mm to 10 mm.

7. A separator for a valve regulated lead acid battery as claimed in any one of claims 1 through 6, wherein the density 5 of the separator is from 0.15 g/cm<sup>3</sup> to 0.18 g/cm<sup>3</sup>.

8. A valve regulated lead acid battery including a separator for a valve regulated lead acid battery as claimed in any one of claims 1 through 7.

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